

## Introduction

This course is designed to equip professionals with real-world skills in Python programming using Microsoft technologies. From foundational concepts to advanced development practices, this course aligns with corporate needs, ensuring your team stays ahead in today's tech-driven economy. This training program fosters hands-on learning and role-based development.

## Target Audience

This course is ideal for:

- Software developers and engineers looking to upskill in Python
- IT professionals working with Microsoft technologies
- Data analysts and automation experts
- New corporate recruits who require Python as part of their role
- Organizations aiming to boost internal Python capabilities

## Importance of Python Skills

Python is one of the most in-demand programming languages today. With Microsoft technologies deeply integrated into corporate systems, employees trained in **Microsoft Python development** become versatile assets for any organization. This course empowers employees to:

- Automate repetitive tasks in Microsoft environments
- Develop scalable applications and APIs
- Work seamlessly with Azure and cloud tools
- Enhance data analysis and reporting using Python
- Adapt to cross-functional tech roles with confidence

With Python proficiency and Microsoft certification, your workforce will stay competitive and future ready.

## Modules

1. **Introduction to Python Programming**
  - Syntax, Variables, and Data Types
  - Control Flow and Functions
  - Jupyter Notebooks
  - Choosing your IDE: A tour of options
2. **Object-Oriented Programming with Python**
  - Classes, Inheritance, and Encapsulation

**3. Python for Web and API Development**

- Flask/Django Basics
- RESTful API Creation

**4. Data Handling and File Operations**

- Working with JSON, CSV, XML
- File I/O and Exception Handling

**5. Working with Microsoft Azure and Python**

- Azure SDK for Python
- Building cloud-native Python apps

**6. Automation with Python in Microsoft Environments**

- Scripting for Microsoft Excel and Office
- Automating Azure Tasks

**7. Testing and Debugging in Python**

- Unit Testing, Logging, and Error Tracking